

## **ABSTRACT**

The invention relates to the processing of a biological sample for histological analysis. In particular, it relates to a rapid automated processing system that can be operated with continuous throughput and that eliminates the use of toxic solvents such as xylene. Provided is a method for processing a biological sample for histological analysis, comprising contacting the sample with a composition comprising a supercritical or near supercritical fluid followed by impregnating the sample under a pressure of more than 1 bar with an embedding medium, preferably paraffin. Also provided is a processor (1) for preparing at least one sample (10) for histological analysis, comprising at least one process reactor (9) for the at least one sample (10), characterized in that the processor (1) comprises supplying means (4) for supplying to the reactor (9) at least one substance of which at least one is in supercritical phase or near supercritical phase and at least one supplying means (7) for adding the embedding medium to the reactor (9) through conduit (8).